Synopsis for Ph.D. Registration in Botany

Topic of Research

"A Floristic Study of Kandhar Taluka of Nanded District, Maharashtra"

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SUBJECT: BOTANY

TOPIC OF RESEARCH: "A Floristic Study of Kandhar Taluka of Nanded District, Maharashtra"

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1. Introduction:

Kandhar is a Taluka in Nanded District of Maharashtra State, India. It belongs to Marathwada region . It belongs to Aurangabad Division . It is located 39 KM towards South from District head quarters Nanded. 533 KM from State capital Mumbai towards west. Kandhar Taluka is bounded by by Loha Taluka towards North , Mokhed Taluka towards South , Jalkot Taluka towards South , Palam Taluka towards west . Loha City , Nanded-Waghala City , Mukhed City , Purna City are the nearby Cities to Kandhar. Kandhar consist of 166 Villages and 116 Panchayats . Majare Warwat is the smallest Village and Pethwadaj is the biggest Village . It is in the 371 m elevation(altitude) . The coordinates are 18.9005°N 77.2014°E. **Demographics**:Andh is the Local Language here. Also People Speaks Indo-aryan, marathi, punjabi, urdu . Total population of Kandhar Taluka is 211,347 living in 38,333 Houses, Spread across total 166 villages and 116 panchayats . Males are 109,747 and Females are 101,600. Total 20,772 persons lives in town and 190,575 lives in Rural. Weather and Climate:It is too Hot in summer. Kandhar summer highest day temperature is in between 33 ° C to 44°C .Average temperatures of January is 26 ° C , February is 27 ° C , March is 32 ° C , April is 35 ° C , May is 38 ° C. Kandhar is the southern taluka of Nanded District which still abounds in a great variety and large number of species of flowering plants in Maharastra state. The topography of taluka varies from high hilly area to plains. Some part of the taluka is covered by hilly forest. The entire area is composed of a number of large, medium size lakes out of which Jagtung sagar the is largest lake in Kandhar and other small lakes, streams and rivers found which presents the diversity in the vegetation. Manyad River is most valuable source of water to Kandhar. On Manyad River, Manar Reservoir plays very important role in irrigation of the surrounding area of the river. Kandhar is also famous for its historical Kandhar fort. Dargah Moulana Shah Mohammad Rafiuddin Qhandari R.A., Dargah Sangde Sultan (Rehmahullah), Dargah Hazrat Maqdoom Baba Kandhari are the famous dargahs in Kandhar taluka. **List of Villages of Kandhar Taluka:**Ambulaga, Alegaon, Anandwadi, Aural, Babulgaon, Bachoti, Bahadarpura, Balantwadi, BamniP.k., Barul, Bhandar

Kumthyachiwadi, Bhendewadi, Bhukmari, Bhutyachiwadi, Bijewadi, Binda, Bolka,BoriBk., BoriKh., Bramhwadi, Chauki (Mahakaya), ChaukiDharnapuri, ChikhalBhosi, Chikhali, ChincholiP.K., Dahikalamba, Daithana, Datala, Dewaichiwadi, Dhanora (Kavtha), Dharmapuri Majare, Digras Bk., Digras Kh., Dinda, Gandhinagar, Ganganbid, Gaul, Ghagardarwadi, Ghodaj, Ghubadwadi, Gogdari, Gonar, Gulabwadi, Gunda, Guntur, Guttewadi, Hadoli B.S., Halda, Hanmantwadi, Harbal P.K., Hasul, Hatkayal, Hiparga Shadivan, Imamwadi, Jakapur, Jangamwadi, Kalka, Kallali, Kandharewadi, Kartala, Katkalmba, Kautha, Kauthawadi, Khandgaon Hamid, Khudyachiwadi, KotBazar, Kurla, Ladka, Lalwadi. Lath.Kh., Madali, Mahalingi, Majare Warwat, Manaspuri, Mangal Sangvi, Mangnali, Marshivni, Masalaga, Mohija, Mundewadi Tarf Khandobachiwadi, Nagalgaon, Nandanshivani, Nandanwan, Narnali, Naugharwadi, Navrangpura, Nawandyachiwadi, Osmannagar, Panbhoshi, Pangra, Panshevadi, Paranda, Patalganga, Pethwadaj, Phulwal, Pimpalyachiwadi, Pokharni, Rahati, Ramanaik Tanda, Rautkheda, Rui, Sangamwadi, Sanguchiwadi, Sawargaon Nipani, Sawleshwar, Shekapur, Shellaliwadi, Shiradhon, Shirsi Bk., Shirsi Kh., Shirur, Shriganwadi, Somthana, Talyachiwadi, Telangwadi, Telur, Tokwadi, Umarga Khojan, Umbaj, Wahad, Wakhrad, Wanjarwadi, Warwant, Yelur. **Flora** is the plant life occurring in a particular region or time, generally the naturally occurring or indigenous—native plant life. **Taxonomy** is a branch of science that encompasses the description, identification, nomenclature, and classification of organisms or taxonomy is the classification and naming of organisms in an ordered system that is intended toi ndicate natural relationships, especially evolutionary relationships.

2. Review of Literature and Development in the subject (previous work done in the relevant area):

Aher (2015) have done "Floristic Diversity Assessment of Parner Tahsil, Maharashtra(India)", and reported 410 taxa belonging to 295 genera and 91 families of flowering plants.

Gonarkar and Kshirsagar (2013) have done "Floristic Study of Shirur Region Pune, Maharashtra, India" and reported over 161 plants belonging to more than 49 families among which Caesalpiniaceae and Mimosaceae werere the most dominant family.

Kamble et. al. (2013) have done work on "New Additions to The Flora of Nagpur District, Maharashtra" and the author collected some taxa from the different locations and various habitats for the first time, the collected specimens belonging to families Spigeliaceae, Verbenaceae, Caesalpiniaceae, Solanaceae, Oxalidaceae and Apocynaceae.

Sinha(2013) have done "A Floristic Study of Koria District (Chattisgarh) India" and reported 657 species under 439 genera and 119 families of angiosperms of these, 364 species are wild and 293 species are cultivated.

Wagay et. al. (2015) have done " A floristic survey of flowering plants from Vidyabharti Mahavidyalaya campus, Amravati (Maharashtra) India" and reported 91 species of flowering plants in which 43 were herbs and 25 shrubs and 24 angiospermic trees distributed in 22, 13, and 12 families respectively.

3. Objectives of Research/ Proposed Hypothesis:

Aim: To study the flora of flowering plants of Kandhar Taluka, of Nanded District, Maharashtra.

Objectives:

To study floristic wealth of flowering plants of Kandhar Taluka.

To collect the flowering plants of Kandhar Taluka.

To preserve the flowering plants by preparing herbaria.

To identify the collected flowering plants using different floras, keys.

To update the nomenclature as per the international rules.

To list all flowering plants from Kandhar Taluka.

Proposed Hypothesis:

The present study may account the diversity of the flowering plants. The study also deals with various species of flowering plants, giving information on distribution, taxonomic, ecological features, local names and citation of specimen along with a short description. Naturally occurring, cultivated and introduced plants are enumerated after their respective genera or families. The plant bio-diversity of Kandhar Taluka is quite varied and interesting. The plants seen in this area are also rich in economically important species. The present study will lead to better understanding of the plant bio-diversity of this area. The data would contribute to the flora of the Kandhar Taluka, subsequently flora of Maharashtra, India. This will create awareness among the local inhabitants for the conservation of economically and medicinally important plant species by their propagation and their cultivation on commercial scales thereby achieving the goal of sustainable development and improvement in the standard of living.

4. Methodology to be adopted:

i) Literature survey will be done to gather the data on the vegetation of the study area. The data will also be collected by referring to the different libraries Herbarium, internet.

ii) Frequent field visits (seasonal) will be made to survey the plants of this region for the Herbarium and photo-documentation.

iii) Based on the survey work, data obtained will be analyzed and interpreted.

iv) A list all the flowering plants will be prepared and conclusion will be drawn.

5. Importance of study/ Society application:

International status: At the international level, herbaria, botanical gardens and the floras of different countries have been made by the different workers for example the flora of India, China, etc. Floras of different continents also have been made and the plant specimens are preserved in the herbarium and botanical gardens. An herbarium is a place where plant material is preserved using various techniques and arranged in the sequence of an accepted classification. World's largest herbarium is Royal Botanic Gardens, Kew, London.

National status: At the national level, The **Botanical Survey of India (BSI)** is an institution set up by the Government of India in 1890 to survey the plant resources of the Indian empire. The floras of different states of India, and different districts of different states, villages etc have been made by different workers.

List of Botanical Gardens in India

Agri Horticultural Society of India, Alipore, Kolkata

Acharya Jagadish Chandra Bose Botanical Garden,

Shibpur, KolkataLalbagh, Bangalore, Karnataka

Government Botanical Gardens, Udagamandalam, Ootacamund, Tamil Nadu

Orchidarium, Yercaud, Tamil Nadu

Lloyd's Botanical Garden, Darjeeling, West Bengal

Significance of the study: Flora is the plant life occurring in a particular region or time, generally the naturally occurring or indigenous native plant life. Plants are very important to the human being for food, cloth, medicine, construction, etc. plants are the wealth for the human beings. From the current study the list of flowering plants of Kandhar will be prepared flowering plants. From the study we will come to know flowering plants from Kandhar Taluka. The flowering plants of different seasons we will come to know from the present study. The various grasses and dicot plants we will come to know from the present study. The plants of different economic important value we will come to know from the present study. The present study will be helpful to the local peoples, students, researchers etc..

6. Proposed work plan/ Formulation and Structure of Study:

First year: Course work and Collection of flowering plants from Kandhar Taluka of Nanded District in different seasons will be done along with their identification, nomenclature and documentation. Herbarium and photo documentation of the flowering plants will also be done.

Second year: Collection of more flowering plants from Kandhar Taluka in different seasons. Literature survey will be done to gather the data on the vegetation of the study area. The data will also be collected by referring to the different libraries, Herbarium, internet. Compilation and typing of Thesis.

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